

U.S. Patent Application
Serial No. 10/584,004

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FEB 24 2010

ATTACHMENT A

Claims 1 – 12: (Cancelled)

13. (Currently Amended) An adduct comprising MgCl_2 , ethanol and a Lewis base (LB) different from water, said adduct further comprising a fusion enthalpy lower than 100 J/g, and formula $\text{MgCl}_2 \cdot (\text{EtOH})_n (\text{LB})_p$, wherein n is from 2 to 6 and p is $0 < p/(n+p) \leq 0.1$.

14. (Currently Amended) The adduct according to claim 13, wherein p is $0 < p/(n+p) \leq 0.0125$.

15. (Previously Presented) The adduct according to claim 13, wherein the Lewis base is selected from ethers, esters, compounds of formula RX_m , and combinations thereof, wherein R is a hydrocarbon group comprising from 1 to 20 carbon atoms; X is $-\text{NH}_2$, $-\text{NHR}$ or $-\text{OH}$; and m is 1 or higher.

16. (Previously Presented) The adduct of claim 15, wherein RX_m is selected from the group consisting of methanol, propanol, isopropanol, n-butanol, sec-butanol, tert-butanol, pentanol, 2-methyl-1-pentanol, 2-ethyl-1-hexanol, phenol, 4-methyl-1-phenol, 2,6-dimethyl-1-phenol, cyclohexanol, cyclopentanol, ethylen glycol, propylen glycol, 4-butanediol, glycerine, mannitol, polyvinyl-alcohol, acetonitrile, ethylenediammine, 3-picoline, triethanolamine, triethylamine, and diisopropylamine.

17. (Cancelled)

18. (Previously Presented) A catalyst component for polymerizing at least one olefin comprising a product of a reaction between a transition metal compound and the adduct according to claim 13.

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19. (Previously Presented) The catalyst component according to claim 18, wherein the transition metal compound is selected from at least one titanium compound comprising formula $Ti(OR)_nX_{y-n}$, wherein n is between 0 and y ; y is a valence of titanium; X is halogen; and R is an alkyl radical comprising 1-8 carbon atoms, or COR , wherein R is a hydrocarbon group comprising from 1 to 20 carbon atoms.

20. (Previously Presented) The catalyst component according to claim 19, wherein the titanium compound is selected from $TiCl_3$, $TiCl_4$, $Ti(OBu)_4$, $Ti(OBu)Cl_3$, $Ti(OBu)_2Cl_2$, and $Ti(OBu)_3Cl$.

21. (Previously Presented) The catalyst component according to claim 18, wherein the reaction between the transition metal compound and the adduct is carried out in presence of an electron donor compound.

22. (Previously Presented) The catalyst component according to claim 21, wherein the electron donor is selected from esters, ethers, amines, and ketones.

23. (Previously Presented) A catalyst for polymerizing at least one olefin comprising a product of a reaction between the catalyst component according to claim 19, and an aluminum alkyl compound.

24. (Previously Presented) A process for polymerizing at least one olefin of formula $CH_2=CHR$, wherein R is hydrogen or a hydrocarbon radical comprising 1-12 carbon atoms, carried out in presence of the catalyst according to claim 23.

25. (Currently Amended) An adduct comprising $MgCl_2$, ethanol and a Lewis base (LB) different from water, said adduct further comprising formula $MgCl_2 \cdot (EtOH)_n(LB)_p$, wherein n is from 2 to 6 and p is $0 < p/(n+p) \leq 0.0125$ $p/(n+p) \leq 0.0125$.

26. (Previously Presented) An adduct comprising $MgCl_2$, ethanol and a Lewis base (LB)

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different from water, said adduct further comprising formula $\text{MgCl}_2 \cdot (\text{EtOH})_n (\text{LB})_p$, wherein n is from 2 to 6 and p is $p/(n+p) \leq 0.1$, and said Lewis base is selected from the group consisting of methanol, propanol, isopropanol, n-butanol, sec-butanol, tert-butanol, pentanol, 2-methyl-1-pentanol, 2-ethyl-1-hexanol, phenol, 4-methyl-1-phenol, 2,6-dimethyl-1-phenol, cyclohexanol, cyclopentanol, ethylen glycol, propylen glycol, 4-butanediol, glycerine, mannitol, polyvinyl-alcohol, acetonitrile, ethylenediammine, 3-picoline, triethanolammine, triethylammine, and diisopropylammine.